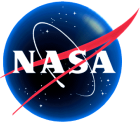


Instrument Incubator Program Status

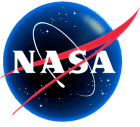
Kenneth Anderson
Earth Science Technology Office

ESTO



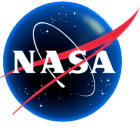
IIP Status

- IIP-1:
 - 26 of 27 IIPs have been completed.
 - Final one awaiting delivery of Final Report
- IIP-2:
 - 11 Proposals Accepted
 - 4 JPL, 2 GSFC, 2 LaRC, Harvard, Ohio State, Polatomic
 - 8 have had Option 1 exercised
 - Remaining three to have their annual reviews by m/e March
 - Expect to exercise Option 1 by end of March
- IIP-3:
 - 28 Proposals Received
 - 9 Proposals Accepted
 - 4 JPL, 2 GSFC, Univ. of Michigan, Univ. of Colorado, Ball Aerospace
 - 6 Under Contract
 - Expect one more under contract by end of March
 - Contracts with Ball Aerospace and Univ. of Colorado in works



IIP 3 Selections

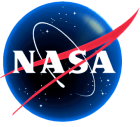
- NRA for IIP-3 Stated the following:
 - “In summary, NASA is soliciting proposals focused on advanced observation technologies in the following areas;
 - Topography and surface change
 - Gravity field Measurement
 - Tropospheric profiles of O₃, CO, NO_x from GEO
 - Atmospheric temperature, moisture and rainfall from GEO
 - Sea ice thickness and snow cover
 - Coastal region change from GEO
 - Innovative technologies supporting measurement concepts from the L1 or L2 libration points. “
 - Selected IIPs addressed:
 - Topography and surface change: Scott Hensley (JPL) - AIRSAR
 - Gravity Field Measurement: Robert Nerem (UColorado) - IRT
 - Atmospheric temperature, moisture and rainfall from GEO
 - Thomas Kampe (Ball) – SIRAS-G; Eastwood Im (JPL) – NEXRAD in Space; and Bjorn Lambrigtsen – GeoSTAR
 - Sea ice thickness and snow cover – Ziad Hussein (JPL) – CAS
 - Tropospheric profiles of O₃, CO, NO_x from GEO – Scott Janz (GSFC) – GeoSpec
 - Coastal region change from GEO – Scott Janz (GSFC) – GeoSpec
 - Innovative technologies supporting measurement concepts from L1 or L2 – Jay Herman (GSFC) – SVIP
 - Grant was also made to Kamal Sarabandi (UMichigan) for a study of an innovative constellation of GEO-LEO SAR satellites for earth observation. This has the potential to address Topography and surface change, coastal region change from GEO and sea ice thickness and snow cover investigations



IIP-2 Selectees

- IIP-2 Selectees:

- James Anderson, Harvard: “ICOS, CAPS and CRDS: New Techniques for Precise, Low-Cost, Airborne, In-Situ Mapping of Species for AURA Collaborative Science”
- Eastwood Im, JPL: “Advanced Precipitation Radar Antenna and Instrument (APRA)”
- William Heaps, GSFC: “Fabry-Perot Interferometer for CO₂”
- Joel Johnson, OSU: “Digital Receiver with Interference Suppression for Microwave Radiometry”
- Allen Larar, LaRC: “Tropospheric Trace Species Sensing Fabry-Perot Interferometer (TTSS-FPI)”
- Robert Menzies, JPL: “Laser Absorption Spectrometer for Global-Scale Profiling of Tropospheric Carbon Dioxide”
- Martin Mlynczak, LaRC: “Far-Infrared Spectroscopy of the Troposphere (FIRST)”
- Mahta Moghaddam, JPL: “Dual-low-frequency Radar for Soil Moisture Under Vegetation and At-depth”
- Robert Slocum, Polatomic Inc: “Miniature Vector Laser Magnetometer”
- Eric Smith, GSFC: “Lightweight Rainfall Radiometer”
- William Wilson: “Development of Ultra Stable Microwave Radiometers for Future Sea Surface Salinity Measurements”



IIP-3 Selectees

- IIP-3 Selectees:

- Scott Hensley, JPL: “Rapid-Repeat Deformation Measurement Capability for AIRSAR System”
–Task redefined i.a.w. acceptance letter
- Jay Herman, GSFC: “SVIP: Solar Viewing Interferometer Prototype for Observations of Earth Greenhouse Gases”
- Zeid Hussein, JPL: “Cryospheric Advanced Sensor: A Spaceborne Microwave Sensor for Sea Ice Thickness and Snow Cover Characteristics”
- Eastwood Im, JPL: “NEXRAD in Space (NIS): A Radar for Monitoring Hurricanes from Geostationary Orbit”
- Scott Janz, GSFC: “Geostationary Spectrograph (GeoSpec) for Earth and Atmospheric Science Applications”
- Thomas Kampe, Ball Aerospace: “The Spaceborne Infrared Atmospheric Sounder for Geosynchronous Earth Orbit (SIRAS-G)”
- Bjorn Lambrigtsen, JPL: “Prototype Geostationary Synthetic Thinned Aperture Radiometer”
- Robert Nerem, Univ. of Colorado: “Interferometric Range Transceiver (IRT) for Measuring Temporal Gravity Variations”
- Kamal Sarabandi, Univ. of Michigan: “Geostationary/Low-Earth Orbiting Radar Image Acquisition System: A Multi-Static GEO/LEO SAR Satellite Constellation for Earth Observation”